



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,372	11/20/2006	Masataka Fukuda	12400-071	9832
757 7590 06/03/2009 BRINKS HOFER GILSON & LIONE P.O. BOX 10395 CHICAGO, IL 60610				
EXAMINER				
COKER, ROBERT A				
ART UNIT		PAPER NUMBER		
3616				
MAIL DATE		DELIVERY MODE		
06/03/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/577,372

Applicant(s)

FUKUDA ET AL.

Examiner

ROBERT A. COKER

Art Unit

3616

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3,5,6,8,9 and 11-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3,5,6,8,9 and 11-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

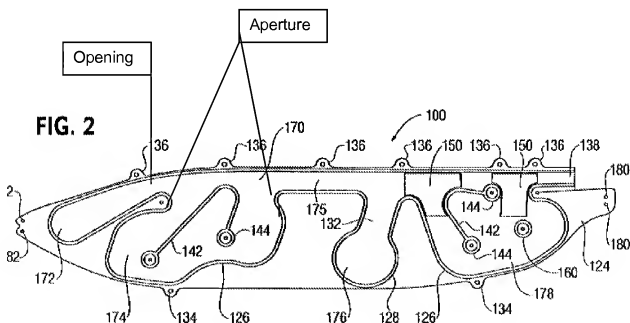
- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SI-108)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 3, 5, 6, 8, 9, 11-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heudorfer et al. (U. S. 6,394,487) in view of Hammer et al. (U. S. 6,343,811).



(Figure 2 is rotated 90 degrees in the clockwise direction)

With respect to claim 3, 6, 9 and 11, Heudorfer et al. disclose a side curtain air bag (100), which includes chambers (172, 174, 176, 178) expanded by gas supplied from a gas generator (12), and expands and develops into a curtain shape along a side part of a vehicle so as to protect vehicle occupants, the side curtain air bag comprising: at least one primary chamber (174, 176, 178) (Column 5, lines 43-46) respectively defining an aperture (wherein the aperture is the portion labeled in the drawing where the gas from the gas generator flows through into chamber 174) (Figure 2 above) that provides fluid communication between the primary chamber and the gas generator, the primary chamber being expandable by gas supplied by the gas generator so as to protect an occupant; at least one secondary chamber (172) defining an opening (wherein the opening is the portion labeled in the drawing forming entrance for the gas from the gas generator into the chamber 172) (Figure 2 above) that provides fluid communication between the secondary chamber and the gas generator, the aperture and the opening sized such that the aperture is substantially larger than the opening so that the secondary chamber begins to substantially expand and develop after the primary chamber is approximately fully expanded and developed by gas from the gas generator; and relative to when the gas is generated by the gas generator high pressure is applied initially to the primary chamber, whereas the secondary chamber gradually increases in pressure to be about the same as pressure of the primary chamber. Heudorfer et al. do not disclose at least two tethers. However, Hammer et al. disclose a first (31) and a second (33) curtain tethers. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to

Art Unit: 3616

modify the invention of Heudorfer et al., such that it comprised at least two tethers in view of the teachings of Hammer et al., so as to keep the curtain taut against the windows of the vehicle.

With respect to claims 5 and 8, the combination (Heudorfer et al. and Hammer et al.) discloses the side curtain air bag, wherein the opening of the secondary chamber is in the fluid communication with the primary chamber, the secondary chamber being expanded by an inflow of the gas from the primary chamber.

With respect to claim 12, 13 and 14, the combination discloses the side curtain air bag, wherein pressure in the primary chamber has reached a maximum value before the secondary chamber begins to substantially expand and develop and the primary chamber continuously decreases in pressure as the secondary chamber expands and develops.

With respect to claims 15, 16 and 17, the combination discloses the claimed invention, except for the pressure of the secondary chamber to gradually increase to about the same as the pressure in the primary chamber by about 4 seconds. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have made the secondary chamber to gradually increase to the same pressure as the primary as claimed, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. (*In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

With respect to claims 18, 19 and 20, the combination discloses the side curtain air bag, wherein the secondary chamber is immediately adjacent to the primary

Art Unit: 3616

chamber and is in direct fluid communication with the primary chamber to receive the inflow of the gas.

3. Claims 3, 5, 6, 8, 9, 11-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Denz et al. (U. S. 6,170,860) in view of Hammer et al. (U. S. 6,343,811).

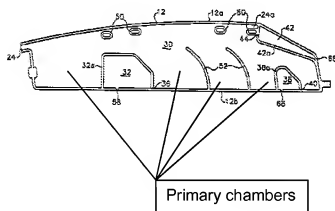


Figure 6A

With respect to claim 3, Denz et al. disclose a side curtain air bag, which includes chambers (30, 32, 40, 42), expanded by gas supplied from a gas generator (Column 1, line 52-53), and expands and develops into a curtain shape along a side part of a vehicle so as to protect vehicle occupants, the side curtain air bag comprising: at least one primary chamber (Figure 6A) respectively defining an aperture (Fig. 6A) that provides fluid communication between the primary chamber and the gas generator, the primary chamber being expandable by gas supplied by the gas generator so as to protect an occupant; at least one secondary chamber (32, 38, 42) defining an opening (36, 40, 44) that provides fluid communication between the secondary chamber and the gas generator, the secondary chamber being expandable by gas supplied by the gas

Art Unit: 3616

generator, the aperture and the opening being sized such that the aperture is substantially larger than the opening so that the secondary chamber begins to substantially expand and develop after the primary chamber is approximately fully expanded and developed by gas from the gas generator, and when the gas is generated by the gas generator, high pressure is applied initially to the primary chamber, whereas the secondary chamber gradually increases in pressure to be about the same as pressure of the primary chamber; Denz et al. do not disclose at least two tethers. However, Hammer et al. disclose a first (31) and a second (33) curtain tethers. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Denz et al., such that it comprised at least two tethers in view of the teachings of Hammer et al., so as to keep the curtain taut against the windows of the vehicle.

With respect to claims 5 and 8, the combination (Denz et al. and Hammer et al.) discloses the side curtain air bag, wherein the opening of the secondary chamber is in the fluid communication with the primary chamber, the secondary chamber being expanded by an inflow of the gas from the primary chamber.

With respect to claim 12, 13 and 14, the combination discloses the side curtain air bag, wherein pressure in the primary chamber has reached a maximum value before the secondary chamber begins to substantially expand and develop and the primary chamber continuously decreases in pressure as the secondary chamber expands and develops.

With respect to claims 15, 16 and 17, the combination discloses the claimed invention, except for the pressure of the secondary chamber to gradually increase to about the same as the pressure in the primary chamber by about 4 seconds. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have made the secondary chamber to gradually increase to the same pressure as the primary as claimed, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. (*In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

With respect to claims 18, 19 and 20, the combination discloses the side curtain air bag, wherein the secondary chamber is immediately adjacent to the primary chamber and is in direct fluid communication with the primary chamber to receive the inflow of the gas.

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT A. COKER whose telephone number is (571)272-8514. The examiner can normally be reached on Monday thru Friday, 8.30 a.m.-5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul N. Dickson can be reached on 571-272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Robert A Coker
Examiner
Art Unit 3616

/RAC/

/Paul N. Dickson/
Supervisory Patent Examiner, Art Unit 3616